Ecuador in the middle income trap

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Abstract:
The middle income trap (MIT) alludes to the challenges that middle income countries face in converging with developed nations, due to their inability to complete the productive transition from low value-added sectors (commodities and natural resource- and labor-intensive manufactured goods) to high value-added sectors (technology-intensive manufactured goods). The objective of this paper is to evaluate the causes behind the MIT in which Ecuador has been entrenched for the past 60 years and the country's prospects for emerging from this trap, analyzing official development strategies and the conditions that the emerging literature about the MIT (which connects with the theory of the developmentalist State and its problematic exportation to the Latin America region) has found are needed for countries that export just a few commodities to make strides forward in development.
Key Words: Middle income trap, commodities, economic growth, structural change, education, innovation, industrial policies

INTRODUCTION

Since Gill and Kharas (2007: 17-18) first coined the middle income trap (MIT), 400 papers have been published about it, a topic both theoretically and empirically relevant. Theoretically, because it complements the development literature in terms of defining how the nature of growth in middle income countries (MIC) is different from that of low income countries (LIC), for which the majority of conventional growth models have been designed. Empirically, because more than 75% of the global population lives in MICs, so the topic has the potential to enrich the economic policy recommendations debate (Gill and Kharas, 2015: 4-7, 20; Agénor, 2015: 4).

Although various authors have recently challenged the very existence of MICs (Im and Rosenblatt, 2013; Bulman *et al.,* 2014; Felipe *et al.,* 2014; Han and Wei, 2015), the results of these analyses are very dependent on the definitions and thresholds used to categorize the countries. What is certain is that pursuant to the latest revisionist work on the concept (Han and Wei, 2015: 25), the MIC is not unconditional, but evidently does exist by virtue of holding countries at bay in a "stable bad equilibrium" stage (Agénor, 2015: 2, 37) from

which it is exceedingly difficult, albeit not impossible, to emerge (Bulman et al., 2014: 20; Han and Wei, 2015: 1; Kumagai, 2015: 5; Gill and Kharas, 2015: 6).

The objective of this paper is to evaluate the MIT in which Ecuador has found itself for over 60 years, as well as the causes behind this status and prospects for emerging from it in light of the development strategies contained in the *National Plan for Good Living 2013-1017*. This case study will draw on the theoretical framework of the emerging literature about the MIT, which is closely tied to the theory of the developmentalist state and its problematic exportation to Latin America. Likewise, this paper will analyze both the proximate and ultimate causes, elucidating the essential role played by the unequal distribution of resources, income, and opportunities in the persistence of the MIT, understood as a situation in which it is very difficult to transition from a natural resource-intensive export growth-based model with unskilled labor to a technology-intensive export model where domestic demand plays a bigger role. These circumstances have led to real growth below the country's potential for a long time now, accompanied by truncated industrialization or premature deindustrialization, which has therefore prevented Ecuador from converging with the reference country or countries at the forefront of the technology revolution (Gill and Kharas, 2015: 7-11).

This paper is structured as follows. The first section analyzes the various ways in which the MIT is defined and measured. The second section provides an account of the proximate and ultimate causes cited in the recent literature to explain why the development transition has been stopped in its tracks. The third section evaluates the case of Ecuador as representative of the broader MIT situation that characterizes a vast subset of Latin American countries. Finally, this work concludes with some final considerations, including recommendations for economic policy and structural reform for Ecuador to break out of the MIT.

THE MIDDLE INCOME TRAP: ABSOLUTE AND RELATIVE DEFINITIONS

The MIT is a concept coined by Gill and Kharas (2007: 17-18) to describe the impossibility of maintaining high growth rates based merely on the accumulation of production factors (natural resources and unskilled labor), a situation that the authors attributed to countries in Latin America. The idea of a transition between low and high income that can be expressed as a development status due to the incapacity to compete through low wages or challenges in moving from imitation to innovation is a recurring theme in the MIT literature.[2]

The MIT has been used to classify countries into one of the four groups into which the global economy can now be divided (Kharas and Kohli, 2012: 87; Kumagai, 2015: 7): *1)* low income countries facing the poverty trap (the majority of Africa); *2)* countries that have achieved middle income status for decades now (the majority of countries in Latin America); *3)* countries that have recently attained middle income status (various ASEAN

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[2] See Gill and Kharas (2007: 5), Paus (2011: 71), Spence (2011: 100), Kharas and Kholi (2011: 281- 282), Agénor and Canuto, 2012: 3), Carnovale (2012: 8), Lin and Treichel (2012: 6-7), Jankowska *et al.* (2012), Egawa (2013: 2), Loser (2013: 2), Im and Rosenblatt (2013: 2), Flechtner and Panther (2013: 2), Agénor (2015: 37).

nations and China), and which should act to avoid falling into the MIT; and *4*) high income countries (OECD and non-OECD).

The MIT describes a situation of low productivity growth (Agénor and Canuto, 2012: 26) in which countries are trapped between low and high income due to structural problems that prevent them from advancing in development after having grown for some time, which is what makes the MIT different from the poverty trap (Agénor, 2015: 13-14; Kumagai, 2015: 4). The MIT can be measured in both absolute and relative terms (Im and Rosenblatt, 2013: 4; Agénor, 2015: 3-4). Absolute definitions of middle income proceed from two different calculations of per capita gross domestic product (GDP) for countries in the global economy: the World Bank Atlas method and the purchasing power parity (PPP) technique derived from the Maddison Project (Felipe *et al.,* 2012; updated version in Felipe *et al.,* 2014) or the Penn World Table (Han and Wei, 2015).

Using World Bank data and the Atlas method,[3] and setting aside reiterated questioning of the use of gross national income per capita as the appropriate indicator to measure well-being (Fanton and Serajuddin, 2015: 15-18; Chang, 2015: 199), there are three principal critiques of this classification (in low, lower middle, upper middle, and high income countries) pertaining to the MIT debate. The first is that the middle income interval is the widest, so the MIT could in part be a matter induced by the statistics specification (Huan and Wei, 2015: 25). The second is that the threshold for high income is substantially lower (in 2014, 12,736$) than the per capita gross national income of the United States (55,200$) or the Eurozone (39,162$), which in principle should facilitate a statistical exit from the MIT (Agénor, 2015: 2). The third is that from 1987 to 2014, there has been a relative decrease in the middle (lower and upper) income thresholds with respect to global income (declining from 38% to 18% and from 82% to 59%, respectively), which should also in theory favor a statistical escape from the MIT (Fanton and Serajuddin, 2015: 25).

On the other hand, the Maddison Project database uses the per capita GDP calculation in international dollars from 1990 in PPP, and is the technique that Felipe *et al.* (2012) used to set the income thresholds for 124 countries from 1950 to 2010. In this classification, the lower middle income interval ranges from 2,000$ to 7,250$ and for upper middle from 7,251$ to 11,750$ PPP. Han and Wei (2015: 2-3) conducted a similar exercise with the Penn World Table (PWT version 8.0) database using international dollars from 2005 in PPP to categorize five groups of countries from 1960 to 2011 into: extremely low income (less than 1,096$), low income (1,096$-2,418$), lower middle income (2,418$-5,550$), upper middle income (5,550-15,220$), and high income (15,220$ and above).[4]

Now, based on the absolute definition of lower middle and upper middle income, we can assert that a country is caught in the MIT if it remains in the same group for more years than necessary for the average of the countries to advance to the next group. According to Felipe *et al.* (2012: 25-26), in 1950-2010, the average for lower middle income countries was 28 years, and for upper middle income countries, 14 years. This means that to spring

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[3]   For   the   Atlas   method,   see   <http://data.worldbank.org/about/data-overview/methodologies> and Felipe et al. (2014: 4); and for the country classification, see <http://data.worldbank.org/about/country-classifications>.

[4] For a further critique of using the PPP, see Fanton and Serajuddin (2015: 21-22) and Chang (2015: 203).

free from the lower MIT, a country would need to grow at a cumulative annual rate of 4.7% for 28 years, and from the upper MIT, at a cumulative annual rate of 3.5% for 14 years.[5]

At the same time, the relative definitions of the middle income (trap) are grounded in the convergence hypothesis and use the relative distance from a benchmark country (which exhibits balanced growth at a rate equal to that of the technological frontier, which has been a cumulative annual 1.8% over the past 125 years, which coincides with the growth rate of the United States in the same time period) or simply the average of the Organization for Economic Cooperation and Development (OECD) (Robertson and Ye, 2013: 2-4; Im and Rosenblatt, 2013: 6-7; Wu, 2013: 4-5; Han and Wei, 2015: 2-3). With the Maddison Project or Penn World Tables data, other authors (Woo, 2012: 2-3; Im and Rosenblatt, 2013: 12, 15; Robertson and Ye, 2013: 4-5; Bulman *et al.*, 2014: 3, 15; Han and Wei, 2015: 6) came up with different intervals. Countries that are in any of these intervals and display a relative per capita GDP growth rate that approaches zero do not converge and, therefore, are considered caught in the MIT.

THE PROXIMATE AND ULTIMATE CAUSES OF THE MIDDLE INCOME TRAP

Regardless of how the MIT is measured, the definitions of this situation imply differential diagnoses that can help address the proximate and ultimate causes behind the MIT.

The proximate causes include weak total factor productivity (TFP) growth, the problem of imperfect structural change, and a lack of industrial policy that appropriately combines incentives and penalties. When it comes to ultimate causes, the literature points to inequalities in resources, income, and opportunities, and their implications for social capital and the quality of institutions as the main explanatory factor behind the MIT.

Weak TFP growth refers to Lewis' (1955: 147-148) "turning point of acceleration" in which the labor factor (initially unlimited supply) must become more productive and skilled in order to bring about an increase in real income by transforming the industrial structure, while capital must incorporate new technology and organizational capabilities.

Ultimately, the economy must boost TFP and change the structure of comparative advantages, making human capital and technological and organizational resources more abundant, which will be reflected in the external competitiveness index, defined as:

$$i = (X - M) / /X + M)$$

This index for a given industry tends to -1 in the phase of development from low income to middle income, because the domestic market is satisfied by imports (M) and there are few exports (X). With the advent of import substitution industrialization (ISI), the index approaches zero, and if the temporarily protected nascent industry is strengthened and becomes competitive, the rate finally turns positive and approaches 1. However, in order to

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[5] The data update by Felipe *et al.* (2014: 20) led to different cumulative annual growth rates and intervals. These variations between the studies by the same authors are indicative of the degree to which the results depend on statistical specifications.

complete process of structural change there must be a shift from mature industry (intensive in abundant and unskilled labor) to advanced industry (intensive in qualified labor and knowledge). The MIT thus snaps into place when a MIC fails to sustain its growth through the generation of new comparative advantages based on higher added-value activities.[6]

This failing is defined as a "product trap" (Felipe *et al.,* 2012: 43), understood as a "problem of imperfect structural change" that arises when "the process of the reallocation of factors to higher productivity and growth potential subsectors and activities is not completed" (Sanguinetti and Villar, 2012: 23), evident in the slow diversification of exports and their destinations (Foxley, 2012: 24-25; Felipe *et al.,* 2012: 35-29); Kumagai, 2015: 8-11). This situation is attributable to a government that cannot manage to improve the skill set of its human capital (because investment in education is low or poorly targeted and efforts in R&D+i are insufficient) (Paus, 2011: 75; Jankowska *et al.,* 2012; Felipe *et al.,* 2012: 34; Foxley, 2012: 23; Egawa, 2013: 4; Vivarelli, 2014: 17-18; Bulman *et al.,* 2014: 11, 14; Agénor, 2015: 13-17) and insists on supply side policies when the key at this stage is really demand. Traditional exports do not continue to grow as they did before because wages are higher and erode competitiveness; what is needed is specialization due to product differentiation and to do so the country requires a sufficiently large domestic market served by innovative companies that need time to develop before proceeding to unconstrained liberalization (Kharas and Kohli, 2011: 285-286; Kharas and Kohli, 2012: 84-85; Vivarelli, 2014: 23).

The preceding brings us to the second of the proximate causes: the lack of an industrial policy that adequately combines penalties and incentives. This is an oft-mentioned item in the body of literature about the developmentalist state theory (Cruz, 2014: 38). In Latin America, on the whole, ISI could be characterized as a system of a carrot without a stick (Paus, 2011: 72-73) that had positive effects when it came to structural change, TFP growth, income, and consequent economic convergence, but faced limitations once Latin American economies reached Lewis' turning point, due to the restrictions of domestic markets in light of the sharp anti-export leanings of the ISI. In response to the selective incentives with penalties system in East Asian countries (the gradual exposure of nascent industries to international competition as they mature), in Latin America, far-reaching and indefinite protections (incentives) with no disciplinary mechanisms to learn from the international competition (penalties) has led to wide-ranging inefficiencies (Paus, 2011: 72-73; Sanguinetti and Villar, 2012: 16, 23). Underlying this phenomenon are substantial differences in the quality of state bureaucracies and the sociology of industrial groups, as well as significantly different types of relationships (collaborative or reciprocal vs. clientele) in the public and private sector (Feltchner and Panther, 2013: 7; Cruz, 2014: 32-34; Zurbriggen and Travieso, 2016: 274-276).

Later the Washington Consensus recipe consisted of only penalties with no incentives (Paus, 2011: 73-74), which led to comparatively worse results than the ISI period (TFP stagnation, a lost decade and a half, divergence from developed countries). This suggests that the orthodox mantras (which proposed abandoning the ISI learning by doing in favor of the Washingtonian learning by trading) were unable to induce the structural changes needed

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[6] See Lin and Treichel (2013: 6-7) and Kumagai (2015: 17-18); and complementarily Sanguinetti and Villar (2012: 9-10, 14-15), Foxley (2012: 21-22), Carnovale (2012: 8), Fletchner and Panther (2013: 2), Vivarelli (2014: 8-13), Bulman *et al*. (2014: 14-15), Gill and Kharas (2015: 7), Kumagai (2015: 18), Agénor (2015: 10, 15).

to get out of the MIT; moreover, they rather prompted imperfect structural change by reallocating labor from relatively high productivity market services and industrial sectors to low productivity informal activities. This "truncated industrialization" (Escaith, 2006: 69) or "premature deindustrialization," by which developing economies are turning into "service economies without having gone through a proper experience of industrialization" (Rodrik, 2016: 2) evidenced, once again, that the critical element was to have adequately designed industrial policies with a competent and stable developmentalist bureaucracy alongside a government-disciplined private sector (Paus, 2011: 73-74; Sanguinetti and Villar, 2012: 14, 23-24; Kharas and Kohli, 2012: 81; Cruz, 2014: 45; Cypher and Alfaro, 2016: 173-174).

The literature about the MIT emphasizes the role of the State in the provision of education and R&D+i, which requires making the use of resources more efficient (Vivarelli, 2014: 7-8; Bulman *et al.*, 2014: 11, 14; Han and Wei, 2015: 9, 15; Agénor, 2015: 13-17). However, it is also necessary to raise income levels to guarantee financial sufficiency to ensure these functions (Sanguinetti and Villar, 2012: 17). From that standpoint, insufficient revenue due to low fiscal pressure, the result of the fragile nature of the fiscal pact, are a sign of the low quality of institutions in terms of efficiency and credibility for citizens (social capital), the cause of, ultimately, elevated vertical inequalities (resources, income, and opportunities, with resulting low social cohesion) and horizontal inequalities (between groups, with the resulting elevated social fragmentation) (Carnovale, 2012: 28-29; Zhang et al., 2013: 10; Egawa, 2013: 4, 9-10; Loser, 2013: 5, 9; Fletchner and Panther, 2013: 3; Bulman *et al.*, 2014: 16-17; Gill and Kharas, 2015: 16).

The inability to enforce selective industrial policies in this case would be the outcome of a State that is weak before the power of the oligarchies in contexts where the distribution of resources and opportunities is very unequal and the business structure is extremely polarized (Sanguinetti, 2012: 17-22; Zurbringgen and Travieso, 2016: 268-269, 273-275). In turn, extreme income inequality, which acts as a constraint on the size of the domestic market, is also a barrier to the successful implementation of a domestic demand-based middle income development strategy (beginning with the enlargement of the middle class) as a laboratory to improve competitiveness (Kharas and Kohli, 2011: 285; Kharas and Kohli, 2012: 84-85). The empirical evidence documenting the blocking effects produced by resource, income, and opportunity inequality on long-term development is, in general, and for MICs in particular, overwhelming (Berg and Ostry, 2011; Foxley, 2012: 65-69; FMI, 2014: 4; Gill and Kharas, 2015: 16).

The theoretical logic of the argument is based on the fact that the extremely unequal distribution of resources (land), opportunities (access to education and political power), and income encourages the elites to oppose institutional changes that would help real growth approach potential growth. On balance, a strategy to spread the education and social mobility necessary to emerge from the MIT would be a threat to the power of the oligarchies, giving rise to a vicious cumulative cycle due to blocking by the upper echelons (North *et al.,* 2007: 4-5, 10-15; Fletchner and Panther, 2013: 3, 14; Gill and Kharas, 2015: 20).

ECUADOR, A LATIN AMERICAN MODEL OF THE MIDDLE INCOME TRAP

Latin America is the middle income region par excellence, with per capita income in 2014 of 8,990$ as calculated by the Atlas method (as compared to 10,787$ for the global average) and 14,053$ PPP in 2014 (as compared to 14,931$ for the global average). With the exception of a few tax havens and other small islands in the Caribbean, only Chile and Uruguay have recently advanced in development, pursuant to World Bank criteria.[7]

Ecuador has been caught in the MIT for over 60 years. If we use the World Bank classification, in 1978 (when the distinction between low and middle income was introduced for developing countries), Ecuador was already a MIC; in 1987 (the first year that the four-category classification was used for countries pursuant to the per capita GDP thresholds calculated with the Atlas method), it had a per capita GDP of 1,660$ and, therefore, was considered a lower MIC, a status it would hold until 2008 when it crossed into the category of upper MIC (where it remains), with per capita GDP of 3,860$.

Based on data from Felipe *et al.* (2012: 27, 51), Ecuador entered the lower middle income category in 1953, remaining there for 58 years until 2010, which is the date when the data series ends. Ecuador is one of 19 countries that has been stuck in the lower middle income trap for over four decades.[8] In Han and Wei's (2015: 3) data, Ecuador would be one of the 14 countries (out of 41 in 1960) unable to change their middle income status as of 2011.
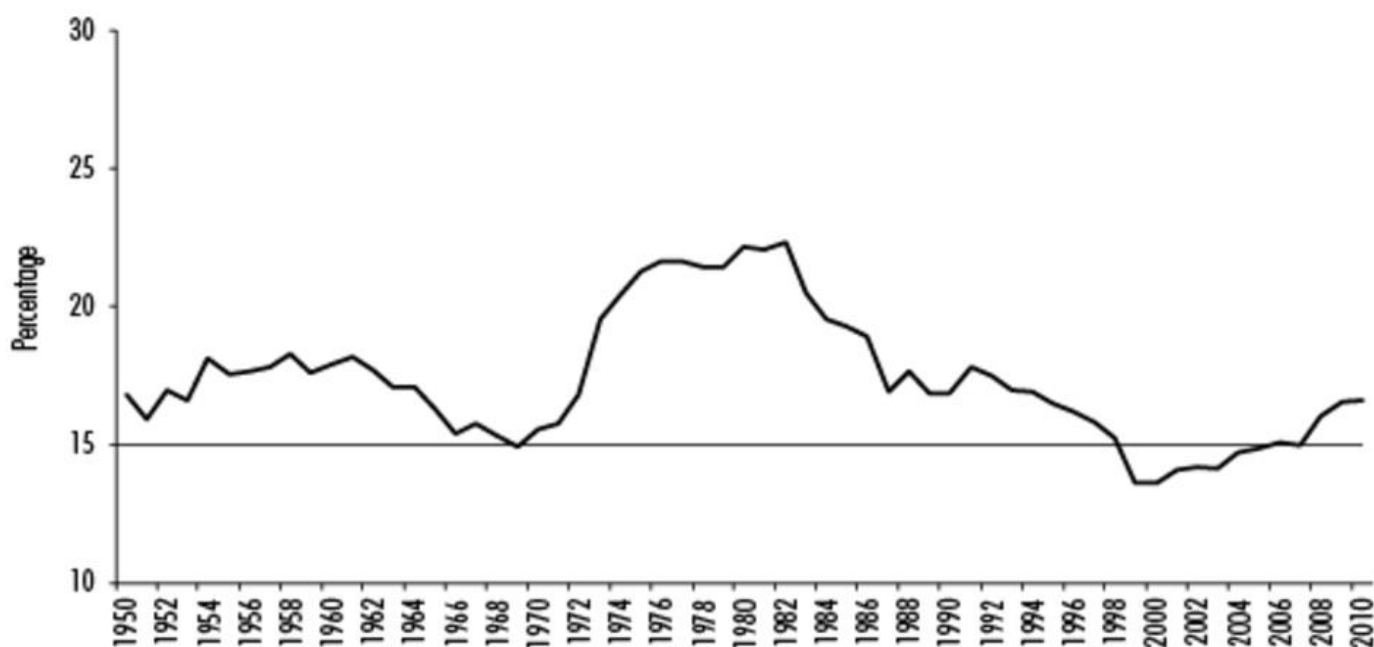
On the other hand, pursuant to the relative calculations of the MIT, Ecuador has been in it since at least 1950 (see Figure 1). Ecuador had a relative per capita GDP growth rate of -0.0018 for 57 years, making it impossible for it to have converged with the United States (Robertson and Ye, 2013: 12).

Source: The Maddison Project, http://www.ggdc.net/maddison/maddison-project/home.htm, 2013 version.

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[7] <http://data.worldbank.org/data-catalog/GNI-per-capita-Atlas-and-PPP-table>

[8] With the 2013 update, Ecuador extended its run to 60 years (above the 55-year threshold that earns a country the "slow transition" moniker), and is one of the 19 countries (of 45) that were unable to go transition out of lower middle income status since 1950 (Felipe *et al.,* 2014: 12-13, 16).

Figure 1. Ecuador in the Middle Income Trap 15/30 (Relative Per Capita GDP Ecuador to the United States, 1950-2010)

Below is an analysis of the proximate and ultimate causes of Ecuador's prolonged stay in the MIT. Concretely, the economy is characterized for having undergone imperfect structural change, the state of education and innovation, industrial policies, and the relationship between quality of institutions and inequality, with a few notable new trends that began when Rafael Correa's administration came into power in 2007 to present.

Imperfect Structural Change

Structural change (the reallocation of productive factors from lower to higher productivity sectors) is one of the elements that drives TFP. Since the 1980s, in Latin America, this change has been considered imperfect or truncated because it has taken place in the inverse direction, moving from more productive sectors (manufacturing industry) to less (the informal sector).[9] In the case of Ecuador, the data available indicate that TFP varied on average by -0.97 (once random disturbances outside of the control of producers are

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[9] This is due to the fact that the neoliberal policies of the 1990s, which Rodrik (2016: 4-5) referred to as "imported deindustrialization" did lead to a small selection of efficient companies, but the economy as a whole was unable to absorb the surplus labor from companies that closed, which caused informality to spike (McMillan and Rodrik, 2011: 15; Rodrik, 2016: 28-29). According to data from CEPALSTAT, the percentage of "low productivity urban employed (informal sector) rose in Ecuador from 53.7% in 1990 to 56.4% in 2014. The percentage of the population employed in the manufacturing sector went from 12.8% in 2000 (first data available) to 11.3% in 2014.
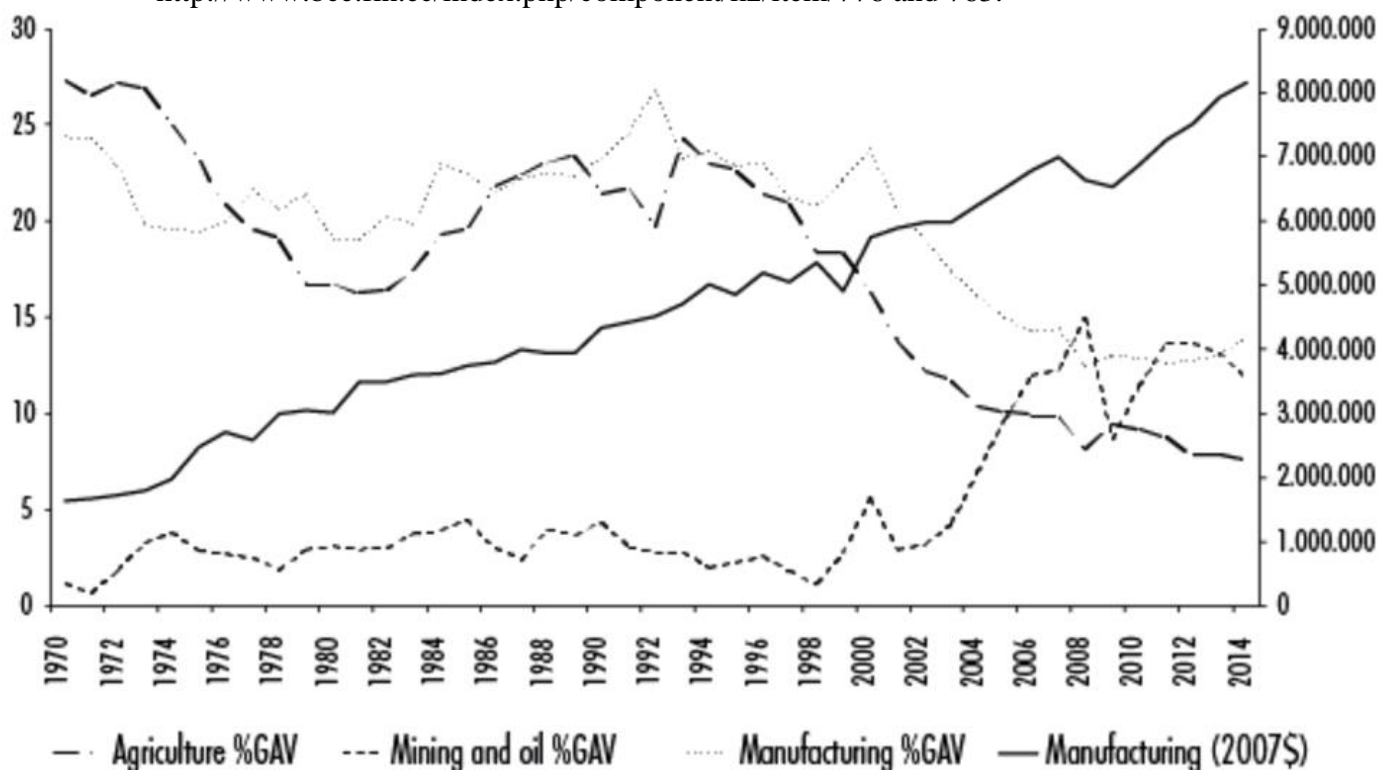
discounted, such as strikes or environmental conditions) for the time period 1981-1990, -0.09 in 1991-2000, and -0.70 in 2001-2010 (Andrade *et al.,* 2014: 65-66).[10]

Throughout Ecuador's development transition, the most pronounced growth periods were driven by strong external demand and high international prices that stimulated exports, very dependent on primary products, from the cacao age in the nineteenth century up through to the banana era in the mid-twentieth century and oil since the 1960s. The adjustment policies of the 1980s did not manage to reduce dependence on primary exports, and the trade and financial liberalization of the 1990s only further reinforced this pattern. In the first half of the twenty-first century, the building of the new heavy crude pipeline, high oil prices, and remittances helped the country recover from the financial-fiscal crisis of 1999-2000. However, the marked expansion of the oil sector was not accompanied by similar momentum in the rest of the economy, exacerbating dependency on this sector (Ponce and Vos, 2012: 11-15).

Figure 2 reveals that the contribution of the primary sector to GDP fell as a result of the reduction in agriculture (which plummeted from 27.4% in 1970 to 7.67% in 2014), and was not compensated for by the rise in mining and oil (which jumped from 1.16% in 1970 to 11.73% in 2014), while manufacturing also experienced a downward trend (which fell from 24% in 1970 to 12% in 2014), despite absolute growth in real terms at a cumulative annual rate of 3.7%.

Source: Created by the authors, data from the Central Bank of Ecuador, based on http://www.bce.fin.ec/index.php/component/k2/item/776 and 763.

Figure 2. Ecuador and Imperfect Structural Change, 1970-2014 (Sectoral Contributions to GDP in % and Thousands of 2007 $)

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[10] See data at <http://datos.bancomundial.org/pais/ecuador>

Dependence on primary products is a determinant of imperfect structural change. Although mining and oil operate with relatively high levels of productivity, they have a very limited capacity to create jobs, so they do not manage to boost the overall labor productivity of the economy as a whole (McMillan and Rodrik, 2011: 24). Moreover, the empirical evidence indicates that an economic structure in which natural resource exploitation predominates is associated with lesser structural change (Dabla-Norris *et al.,* 2013: 4); in countries dependent on exploiting natural resources, such as Ecuador, where oil accounted for approximately half of all exports from 2004 to 2014, liberalization reduces the incentives to invest in modern manufacturing sectors and reinforces the traditional primary export-based specialization pattern (Kumagai, 2015: 18).

It is here where the seeds of the "product trap" are sowed, which, according to Felipe *et al.*'s (2012: 39-42) analysis, is related to an export basket dominated by primary products that are low quality in terms of sophistication and the potential for diversification.[11] In 2007, Ecuador's exports were some of the least sophisticated in the region: Ecuador tended to export products typical of countries with low per capita GDPs, which generated relatively low wages (Hausmann and Klinger, 2010: 8-9). The needle has hardly budged since then, as manifest in the indicator describing the sophistication of Ecuadorian exports, which went from 12,993 in 2007 to 13,372 in 2013 (ALADI, 2014: 64).

This situation has led the external competitiveness index of the manufacturing industry to approach -1 since the 1990s (UNCTAD, 2013: 135, 148), which confirms the hypothesis that countries trapped in the middle income range tend to depend on primary exports, and their industrialization is driven by forward linkages of processed products, which restricts their industrial base and becomes a potential cause of the MIT (Kumagai, 2015: 18).

Education and Innovation

Considerations regarding the capacities necessary for exporting generally harken back to national human capital development policies and, in particular, to investment in education and innovation. When it comes to education, public spending in Ecuador has traditionally been low. The World Bank reports values no higher than 2% of GDP from 1965 to the first decade of the 2000s, with the exception of a few years in the mid-1980s. It was only starting in 2007, with Rafael Correa's administration, that the country began to allocate more resources to education, with spending rising to over 4% of GDP since 2010 (Cepal, 2015a: 50), which has been reflected in a substantial improvement in the net rate of enrollment in secondary education, which rose from 53.6% in 2004 to 83.4% in 2013 (Cepal, 2015a: 47).

In 2010, the country enacted higher education reform and launched specific scholarship programs for tertiary and quaternary level study abroad.[12] However, the lack of good-quality universities in the country, and the marginal percentage of students graduating in

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[11] For a more detailed explanation of these parameters and how they apply in the case of Ecuador, see Caria and Domínguez (2014: 41-45).

[12] <http://reneramirez.ec/becarios-la-esperanza/>

science, technology, engineering, and math (STEM), continue to constitute limitations on productivity growth (Cornell University, 2015: 323, 327).

R&D investment was very low up until 2006: from 0.17% of GDP in the mid-1990s, it fell to 0.13% in 2006, but then began to progressively rise, hitting 0.44% in the last year available (2013), but still far from the Latin American average (0.78$), and with scarce contributions from the private sector (Cypher and Alfaro, 2016: 176-177). The Global Innovation Index (GII)[13] stated that the country, out of Latin American nations, has innovation performance that lags its development level (Cornell University, 2013: 31; Cornell University, 2015: 33).

On the other hand, the Global Competitiveness Index (GCI)[14] for 2015-2016 gave Ecuador a score of 4.07 out of 7, ranked 76th on the global list of 140 countries (WEF, 2015: 7). This value is a clear step forward over previous years, both in the score (from 3.94 in 2012-2013, 3.82 in 2011-2012, and 3.58 in 2007-2008) and the ranking (Ecuador was 86th of 144 in 2012-2013, 101st of 142 in 2011-2012, and 103rd of 131 in 2007-2008). The factor that have helped boost competitiveness in Ecuador include substantial improvements in infrastructure, education, and innovation, although all three realms are still beleaguered by weaknesses (WEF, 2015: 158-159).

Industrial Policies

The industrial policy has closely adhered to the ISI prescriptions, with little flexibility to adapt them to the country's specific conditions. The Military Junta's *General Development Plan 1964-1973* sought to transform the productive structure, diversify exports, and expand the domestic market, in what has come to be called primary ISI, completed in the 1970s with various associated measures, such as indirect subsidies, the freezing of the rates and prices of products and utilities, and tax exemptions (World Bank, 2010: 4; Cypher and Alfaro, 2016: 170-171). In the 1980s, the debt crisis ushered in a period of extreme instability, in which the macroeconomic balance became the primary economic policy objective, through Structural Adjustment Programs, and ISI was abandoned. In the 1990s, under the precepts of the Washington Consensus, policies began to favor trade liberalization. Ecuador joined the Generalized System of Preferences for Drugs, granted by the European Economic Community to Andean countries in 1990s, and gained access to the ATPA preferences system (later known as ATPDEA) with the United States in 1992, among others. Broadly speaking, these trade agreements, which cut average tariffs from 50% in 1985 to 6% in 2010 (Ros, 2014: 14), drove the moderate diversification of exports, although failed to reverse the dependency on primary products, and contributed to the deteriorating TFP, whose growth between 1987 and 2008 fell to one fourth of what it was in the time period 1954-1981 (Ros, 2014: 19). At the same time, nor did the protection policy alternative engender the expected effects; the empirical evidence from the 1970s up

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[13] The GII is an aggregate index that summarizes eight groups of input and output indicators that contribute to characterizing the performance of different countries in terms of their innovation capacity.

[14] The GCI measures competitiveness, defined as the "set of institutions, policies, and factors that determine a country's productivity level" (WEF, 2015: 4).

to the first decade of the 2000s does not show a positive correlation between protection levels and the export growth rate of protected products. This suggests that protection benefitted not the nascent industries with high potential, but rather the industries with good political connections, some of them with strong historical roots (World Bank, 2010: 46, 80).

As such, although dollarization undoubtedly imposes severe constraints on competitiveness, attributing the failure to transform the export basket to rising wage costs (with an average remuneration increase above that of productivity) is very reminiscent of the "spurious competitiveness" problem about which Fajnzylber (1990: 65) spoke.

In recent years, under the Rafael Correa administration, the country has returned to a system of incentives without penalties. Barriers to importation have been raised in the form of new tariffs, rules, and regulations for quality, to the extent that the importation of some products has been outright prohibited, and, finally, as a result of the appreciation of the dollar and plummeting oil prices, in March 2015, safeguards were applied to 32% of the imports on partners from the Andean Community, pursuant to the exceptions permitted by the WTO, a measure that primarily aimed to reduce the trade balance deficit, with which the country has been burdened since 2009 and which represented -0.72% of GDP in 2014, according to data from Ecuador's Central Bank. With this, the country is replicating the ISI scheme of the 1970s, but not obtaining better results on the non-oil trade balance (which has carried over an average deficit equivalent to -9.64% of GDP from 2007 to 2014), although, unlike back then, public investment in infrastructure has since taken off-especially in power and roads-education, and innovation, and whose impacts can be felt, reasonable, in the medium term.

It should be noted, moreover, that willingness to invest in the non-oil sector-the essence of diversification-is highly reliant on expectations for the stability of aggregate demand and economic policy in general; tax policy, on the other hand, has tended to behave pro-cyclically (due to dependence on demand and external prices) and has not contributed to this objective (World Bank, 2010: 63).
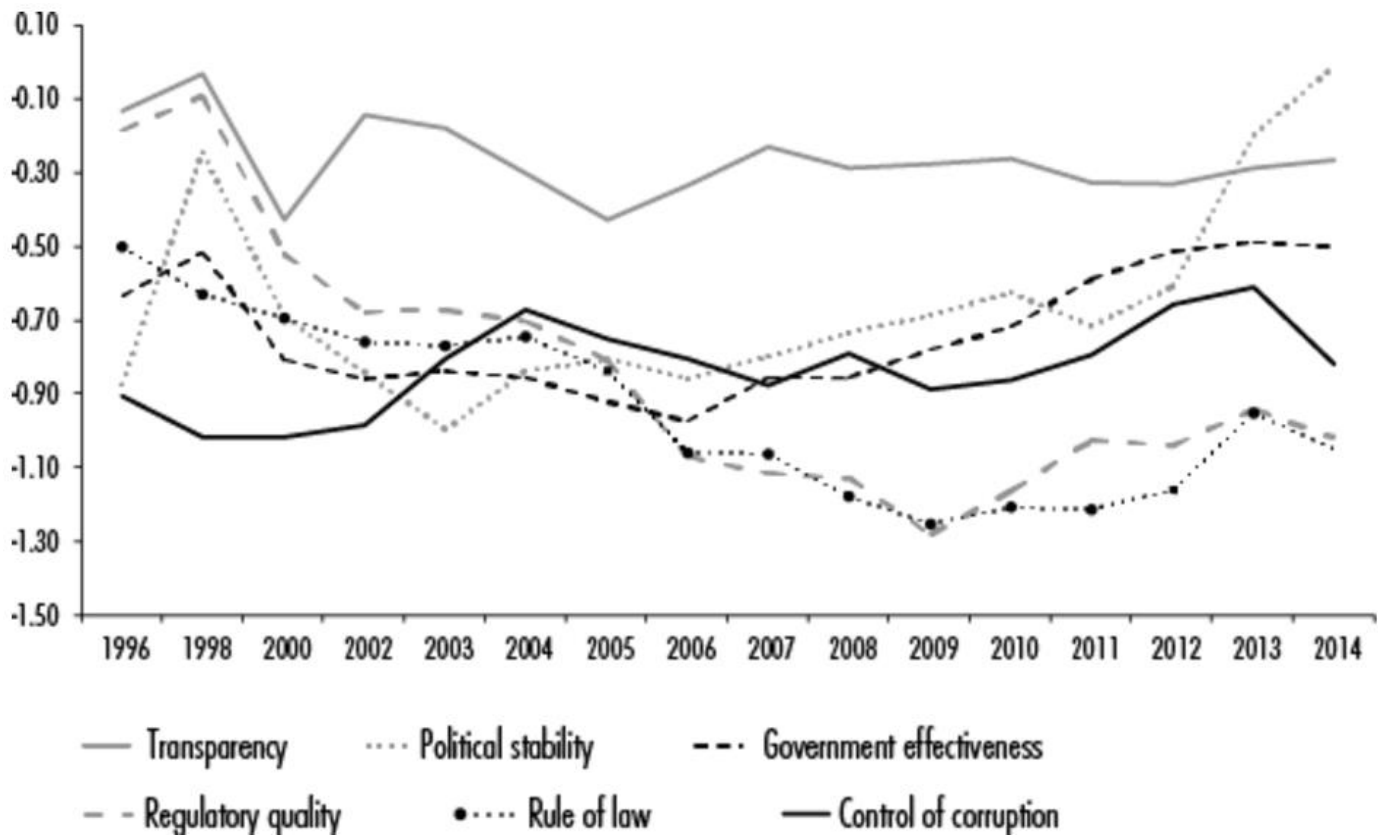

Institutions and Inequality

Figure 3 shows the evolution of variables related to institutional quality used to generate the World Governance Index (WGI)[15] for Ecuador over the past two decades. In spite of dissimilar behavior of the variables since the 1990s and the biases inherent in these indicators (Chang, 2010: 473-474, 487-488), it is clear that all earned low scores, as they stack up on the negative side of the interval from 2.5 (strong governance) to -2.5 (weak governance), with only a mild improvement over 1996 in political stability.

Source: http://info.worldbank.org/governance/wgi/index.aspx#home

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[15] See <http://info.worldbank.org/governance/wgi/>

Figure 3. World Governance Index in Ecuador 1996-2014

Ecuador was unable to consolidate a results-oriented institutional framework with efficient state bodies able to engage in effective collaboration with the private sector in a reciprocal arrangement (Cypher and Alfaro, 2016: 13-174). Public decisions have been sullied by clientelism, the result of the corruption and wealth concentration (Falconí and Oleas, 2012: 37) for which the country continues to be known.

To believe that these problems can only be solved by importing the right institutions would be a crass error in judgment. Institutions—the rules, norms, values, and organizations that encourage regular and predictable behavior in social actors—are endogenous and very costly to import (Change, 2010: 487). Alonso and Garcimartín (2013) demonstrated the existence of a significant correlation between institutional quality in developing countries and variables endogenous to the development level, income distribution, the education system, and available State resources (resulting from the fiscal pact), with the correlation - negative - being highest as income inequality rises (-0.75).

In Latin American countries, the quality of institutions is low as compared to their levels of development, precisely due to high levels of inequality (Alonso and Garcimartín, 2013: 218). The institutional quality of Ecuador could be explained by its marked inequality of resources and opportunities (North, 2013: 18) and, to a lesser degree, income inequality, which, although having receded rather significantly during Rafael Correa's presidency, continues to be high and greater than what the much-questioned Gini index indicates.

Access to productive resources in Ecuador is very exclusive: "5% of landowners concentrate 52% of farmland, while another 60% of small-scale farmers own just 6.4% of the land" (SENPLADES, 2013: 298). When it comes to the concentration of the Ecuadorian

business structure-which reflects the traditional private capital concentration pattern with a Gini index of 0.955, even higher than that of land ownership, which is 0.770-the top decile of the largest companies account for 96% of sales (Larrea and Greene, 2015: 38; Acosta 2013: 16); and the export sector continues to be dominated by the traditional oligarchy, which has benefitted the most from some public policies that have also been good for the middle and poorer classes, although to a much lesser extent for the latter (Falconí and Oleas, 2012: 37).

Access to educational opportunities, although having improved substantially at the secondary schooling levels, continues to be very unequal. In 2014, the percentage of students aged 20 to 24 years (tertiary and quaternary education) out of the population as a whole of the same age displayed a gap of nearly 24 percentage points between the first quintile (18.2%) and the fifth quintile (42.1%) (Cepal, 2015a: 64).

Finally, major horizontal inequalities still persist, observable in the gap between rural and urban areas and between specific population groups. In 2014, the rural poverty rate (35.3%) continued to be more than double that of the urban rate (16.4%), according to data kept by ECLAC (2015b: 20). In terms of specific groups, the rate of extreme (less than 2.5$ in PPP) and moderate (less than 4$ in PPP) poverty among the indigenous was 30 to 35 percentage points higher than non-indigenous groups in 2012 (Grupo Banco Mundial, 2015: 60).

FINAL CONSIDERATIONS

Based on the analysis of the proximate and ultimate causes of the MIT in general, and the specific case of Ecuador, we can deduce a series of economic policy recommendations and structural reforms, about which there is consensus in the literature: economic policies with an appropriate mix of incentives and penalties, prioritizing public investment that will boost TFP growth, developing high-quality institutions, including qualified state bureaucracies, improving government efficiency and strengthening the private sector, and breaking down barriers to entry, which entails reducing inequality (of resources, opportunities, and income) as an obstacle to the creation of virtuous cycles between institutional quality and development.

There is a widespread perception among scholars and politicians that Ecuador has grown below its potential in recent decades and has been unable so shake its productive structure or model, the essence of the MIT problem (Kumagai, 2015: 2; Gill and Kharas, 2015: 11). The World Bank has noted as causes behind this poor performance excessive dependence on oil export income, pro-cyclical fiscal policies, and recurring economic and political instability (World Bank, 2010: 1).

This analysis suggests that, more than these factors, and ruling out the latter variable since Rafael Correa's presidency, inequality would have to be among those dimensions as the ultimate cause of the MIT. It is useful to recall that TFP rises if micro, small, and medium-sized enterprises participate in an environment favorable to innovation rather than one paralyzed by monopolies, oligopolies, or private oligopsonies (Falconí and Oleas, 2012: 47; Vivarelli, 2014: 18-19, 23-24). Income redistribution under President Rafael Correa has been done through social policies to provide direct support to families, but has not led to an overall more democratic and less concentrated economic model (Acosta, 2013: 13), despite

enormous efforts by the public sector to improve the infrastructure, human capital, and institutions in the country.

However, Ecuador has yet to face head on the main obstacles to productive and distributional structural change that would help the country break free from the MIT: resource, income, and opportunity inequality. Accordingly, it will be necessary to expand upon the efforts of the current administration to advance towards the redistribution of educational opportunities, alongside reforms in the land and water ownership structures, and the elimination of barriers to entry to promote genuine competitiveness in the business sector, as well as support for truly innovative companies, rather than those just looking to survive (Vivarelli, 2014: 23-24).

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